ABSTRACT

Disclosed is a fluorine compound having perfluorostyrene introduced at a terminal thereof, as represented in the following Formula 1, and a coating solution and an optical waveguide device using the same, characterized in that the introduction of perfluorostyrene results in a facile fabrication of thin films by a UV curing or a thermal curing, high thermal stability and chemical resistance, and low optical propagation loss and birefringence:

Formula 1

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Wherein Z is O or S; R_F is an aliphatic or aromatic group; y is a natural number of 1-10; y' is an integer of 0-1; x is an integer of 0-200; and

$$Ar = \bigcap_{(F)_{i}} \bigcap_{(F)_{i}}$$

Wherein B is a single bond or selected from the group consisting of -CO-, $-SO_2$ -, -S- and -O-, and Hal is selected from the group consisting of F, Cl, Br and I.